



Leading the Way NASA's Professional Development Initiative



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Effective professional development:



- Requires continuous inquiry be imbedded in the daily life of the school
- Includes discussion, evaluation, consultation, collaboration, and problem-solving.
- Require teachers, school administrators and other partners to take on new responsibilities
- Must be directed by a strategic plan with clear long-term goals and an comprehensive evaluation package



Effective professional development:



- Teachers are no longer the single targeted audience
- Must connect to classroom practice
- Provide ways to learn content in new ways
- Promote incremental change
- Provide many opportunities for collaboration



Effective professional development:



- Relies on in-services with
 - Time for planning and adapting to local needs and standards
 - Multiple opportunities to implement new ideas and strategies
 - Time to experiment with new materials and technology



Recommendations:

I. More extensive and effective approaches to professional development

- Target specific content areas or skills
- Utilize distance learning networks to disseminate and provide follow-on
- Develop sustained professional development for NEW alumni



II. Raise student performance in science, mathematics, technology, and geography



- Enhance content and teaching strategy knowledge of formal and informal K-14 educators
- Include higher education, professional organizations and other federal agencies in all aspects of the planning process
- Identify NASA resources, facilities, and personnel to develop a systems approach



III. Develop learning communities



- Recruit learning teams in districts and states
- Include AESP, ERC, and state NASA resources in the planning and implementation
- Provide state-based professional development opportunities through NASA Centers to support the work of Linking Leaders.
- Identify distance learning networks to provide continued learning through-out the school year.



IV. Critical Issues



A. Equity and increasing diversity

B. Professional Culture and Building Capacity

- Change focus from training to problem-solving
- Provide participants with the skills and strategies to manage their own learning communities
- Provide deep content knowledge in critical concepts
- Model inquiry, constructivist teaching, active research, reflective practice



IV. Critical Issues cont.



C. Leadership roles and responsibilities of all partners

D. Standards and Frameworks

- Focus on the Big Ideas of the standards and weave NASA mission content into appropriate standards
- Create opportunities for participants to confront new research-based ideas and challenge old ones.
- Provide correlation time for local and state standards and the incorporation of new strategies and resources.



IV. Critical Issues cont.



E. Evaluating professional development

- Base efforts on desired outcomes
- Evaluation is a process, not a product
- Use evaluations for improvement of program content, delivery, implementation and to demonstrate impact and outcomes

F. Time for Professional Development

- Sustained over long time period with concentrated time for team building/planning at the start
- Continuous learning opportunities through-out the school year



Strategic Plan:



1. Partner with professional organizations, pre-service educators, and federal agencies in the design and future implementation of high quality professional development and follow-on activities.
2. Initiate needs assessments and focus groups to identify necessary skills and provide in-service opportunities to NASA staff
3. Define roles for design, implementation, and follow-on activities for the education community at all levels of the agency
4. Where possible, partner with other organizations and agencies in their professional development programs